



EUROPEAN CENTRAL BANK

EUROSYSTEM

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The FinTech challenge - potential impact on central bank services

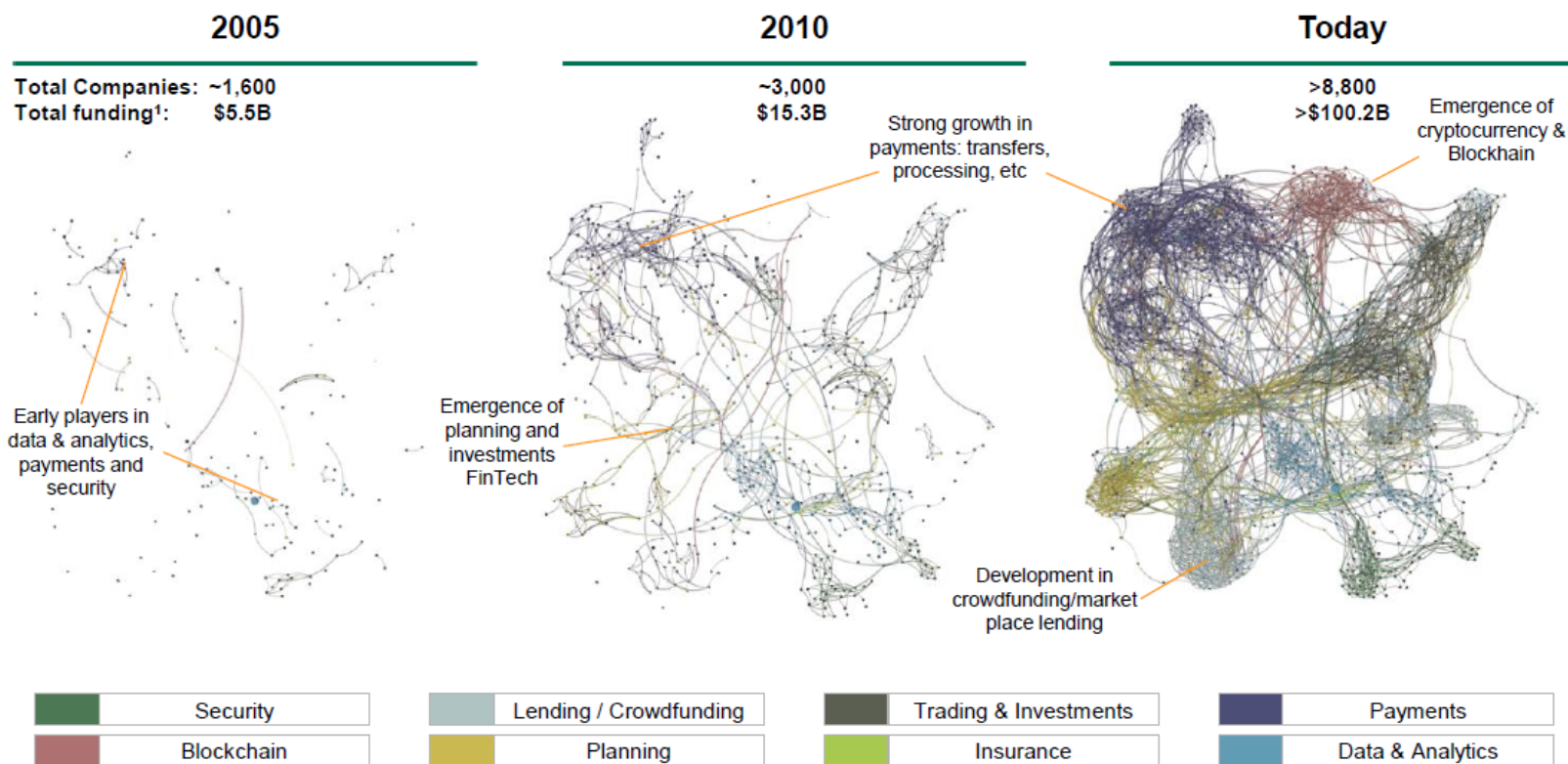
Payments Forum
5 May 2017, Helsinki



**The FinTech
challenge
- potential impact
on central bank
services**

1**Market infrastructures and the FinTech /
blockchain race****2****Potential impact of FinTech /
blockchain on central bank roles****3****Conclusions**

Since 2000, FinTech investments has grown dramatically



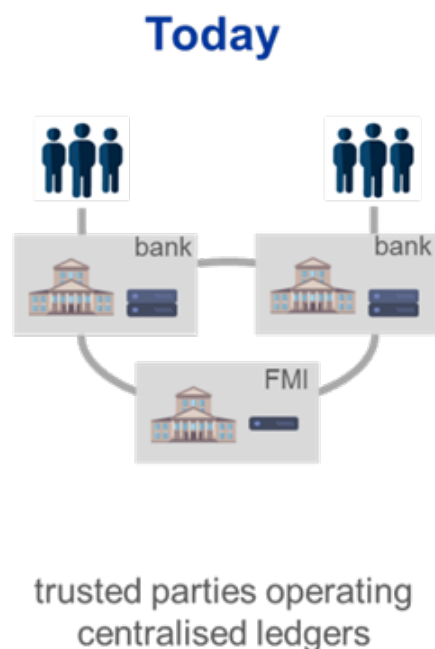
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Visualization based on ~1,800 FinTechs receiving the highest amount of private funding. Dataset mapped with Quid and allowed to cluster based on similar products, technologies, customers etc.
 1) Data based on over 8,800 companies which were discovered across over 4 data sources. Total funding based on date of funding. Total companies based on founding year. Data as of November 2016.
 Source: Quid, BCG /Expand/BCG Digital Venture/B Capital analysis

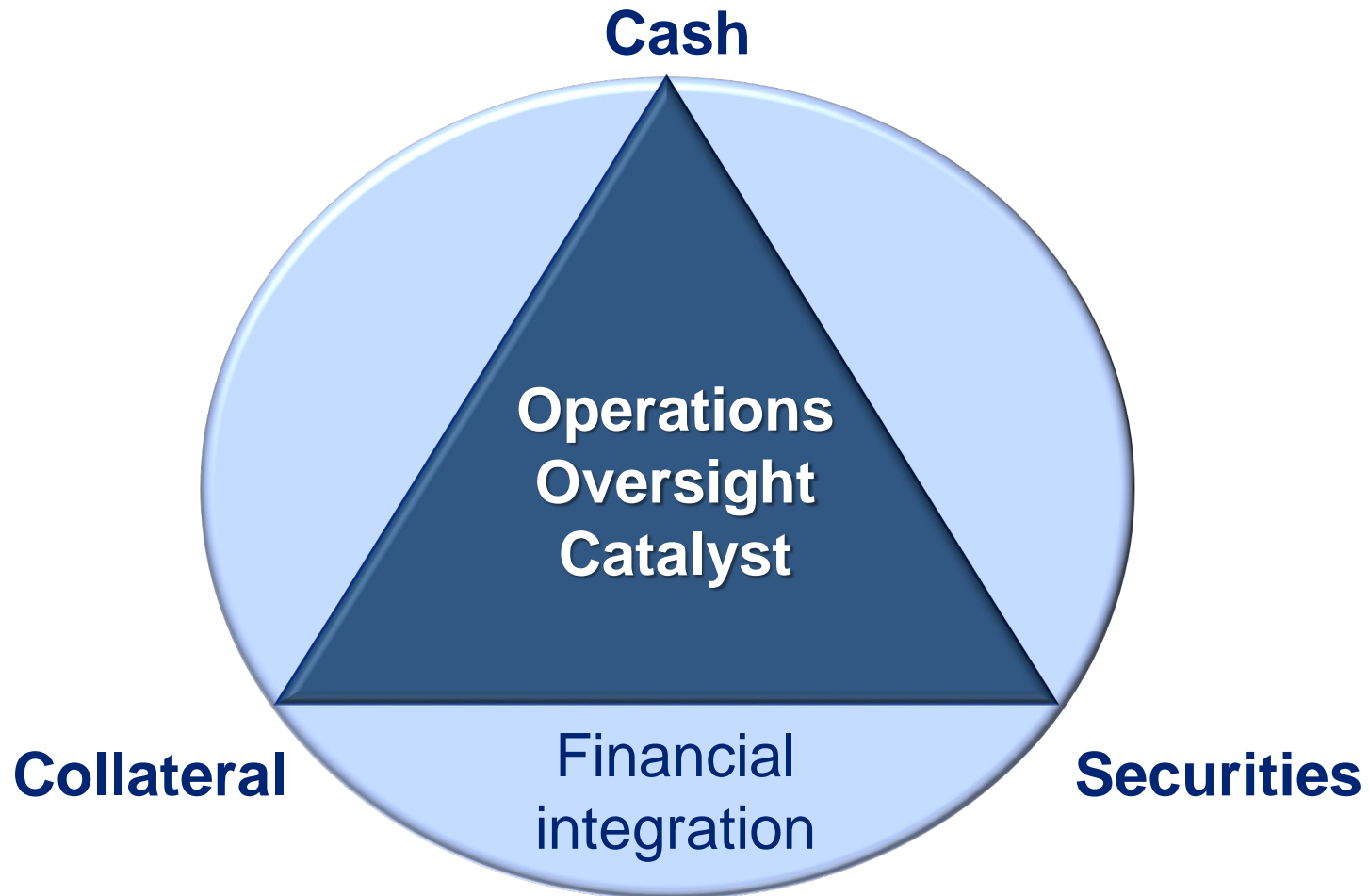
Source: Fintech Control Tower, Expand, November 2016

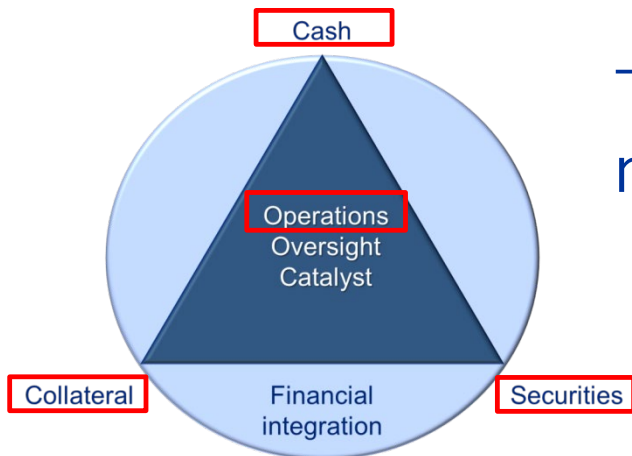
Blockchain and Distributed Ledger Technologies (DLT)

- A shared database to record either transactions or holding balances for a given set of assets and users
- Allows modification of records in a way that makes such information authoritative even without involvement of a central management system



Impact of FinTech / DLT on central bank roles?





The future of Eurosystem market infrastructures

Keeping pace with technological advances and changing needs of users



Consolidation of TARGET2 and T2S

Improve efficiency, cut down operational costs, easier access to services via harmonised interface, etc.



TARGET Instant Payment Settlement

Ensure efficiency and market integration in the settlement of instant payments (operating hours up to **24/7/365**)



Eurosystem collateral management system

Further harmonisation of the Eurosystem's collateralisation techniques and procedures



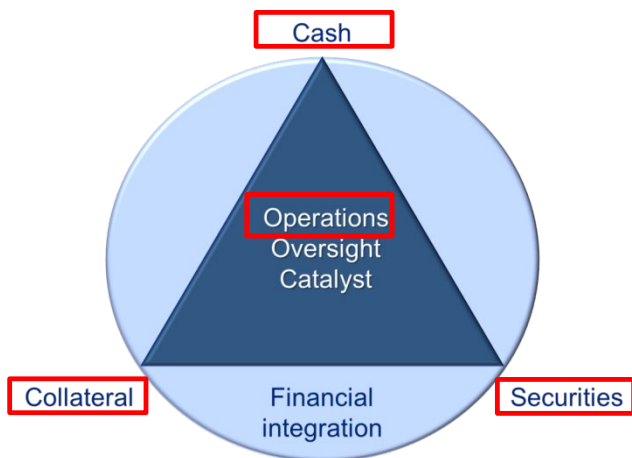
Hammer (DLT) looking for a nail
(Eurosystem market infrastructures)?

- Eurosystem market infrastructure services are currently being rolled out (**TARGET2-Securities**) and new initiatives are being assessed (e.g. **instant payment settlement**)
- Distributed ledger technologies (**DLT**) cannot be the solution at this stage of development but benefit of possible future use is being explored



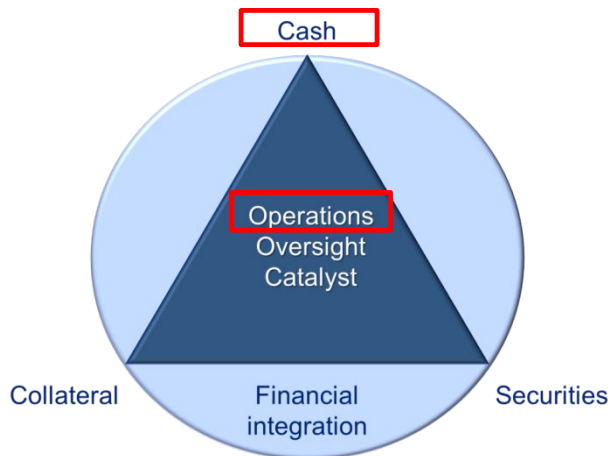
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Operator role - potential use cases

- General analysis / ECB experimental work:
 - Could current services (TARGET2 / T2S) run on DLT?
 - Global context (ECB/Bank of Japan cooperation)
- Concrete feasibility studies:
 - Example: could potential new services be based on DLT (e.g. offering issuance service to CSDs)?
- Holistic perspective:
 - How should central banks support DLT-based market solutions (efficiency of ecosystem)?
 - Changes to the current central bank role?



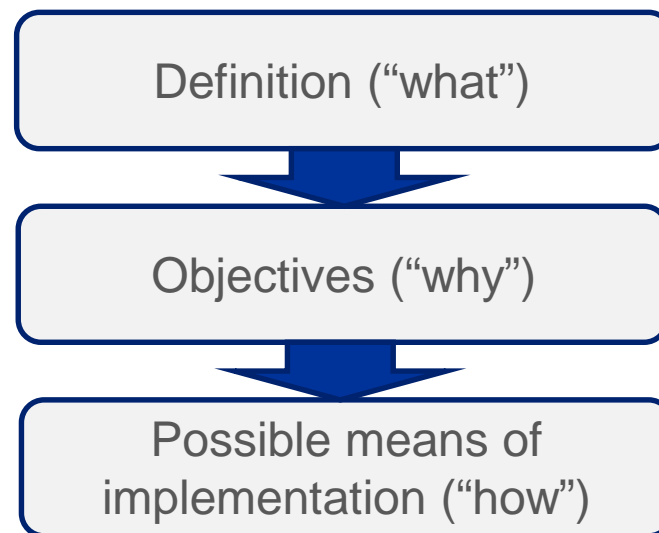
Central bank digital currency

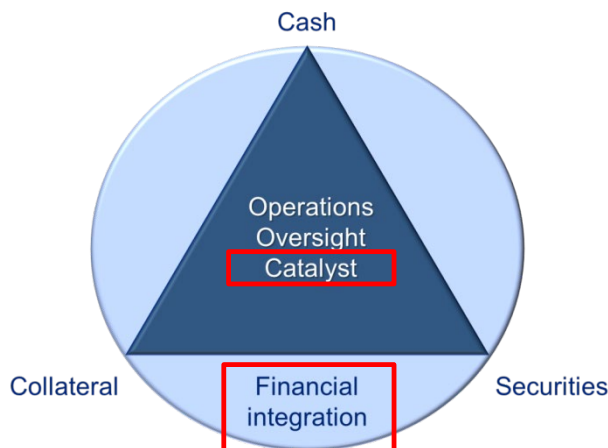
Granting central bank money access to non-banks

=

Should a central bank issue digital central bank money?

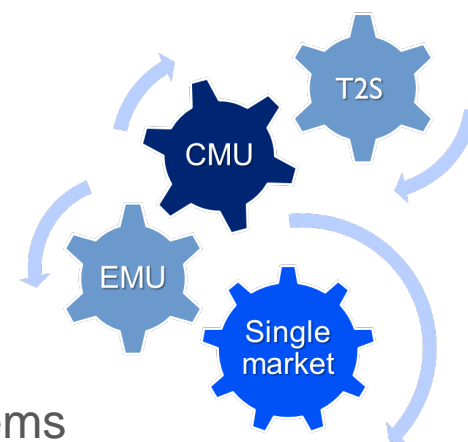
The journey?

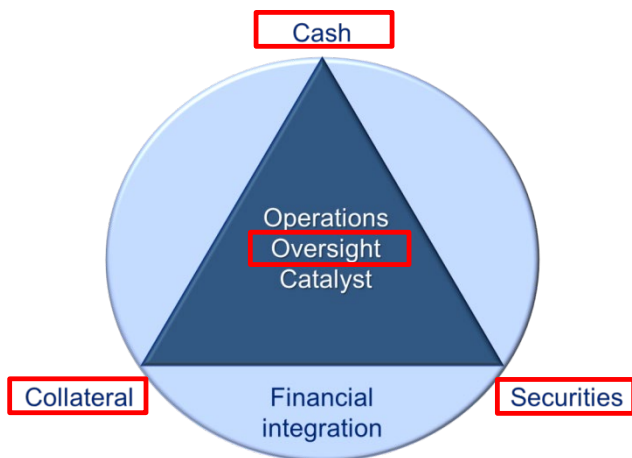




Standardisation and harmonisation

- ➔ **Financial market integration** efforts must not be jeopardised by new technologies
- ➔ Two dimensions:
 - Different DLT solutions need to smoothly interact
 - DLT world needs to interoperate with legacy systems
- ➔ Coordinated efforts are necessary to harmonise potentially DLT-enabled business processes at the industry level and with public authorities





Oversight / Regulatory aspects

➔ Impact on **regulation** (e.g. oversight frameworks)? For example:

- Regulation agnostic to underlying technology?
- Need for dedicated regulation or adapting existing regulation?

➔ Assess how FinTech could help cover **data requirements** (“RegTech”)



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1

**Market infrastructures and the
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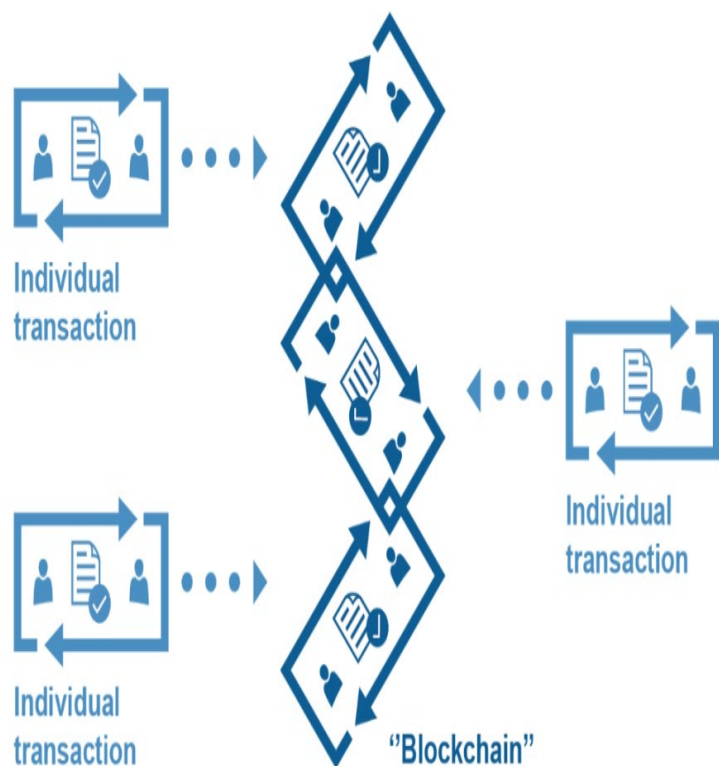
2

**Potential impact of FinTech /
blockchain on central bank roles**

3

Conclusions

Conclusions



- Fintech / DLT could impact and potentially even alter the central bank roles in market infrastructures
- Current DLT cannot be the solution in the ongoing review on the future of Eurosystem market infrastructures but potential future role and impact is being explored